

1937, causing great property damage and accelerating flood-control work.

McGonigle No. 12, deepest oil producing well in the world, was drilled to 10,569 feet.

Stream pollution by sulphuric acid, derived from the oxidation of pyrite in abandoned coal mines, has been prevented by sealing a large number of mines.

Studies of earth magnetism were continued in the S. S. Research, replacing the non-magnetic ship Carnegie which was recently destroyed in an explosion in the south seas.

Climaxing five years of continuous work, the Mount Washington weather observatory, located in the coldest spot in the eastern United States, was incorporated, and plans were made for continuing weather study and forecasting.

Dinosaurs may have witnessed the destruction of planets whose fragments now fall to earth as meteorites, according to studies which show the age of meteorites as only about 100,000,000 years.

ENGINEERING—TECHNOLOGY

Increased Value Placed On Technological Research

TRANSCENDING the mere building of bigger bridges and the breaking of records, is the growing appreciation on the part of the public of the effect of technology upon the social structure of nations and the world.

The National Resources Committee listed the following inventions as likely to be widely used with social effects: Mechanical cotton picker, air conditioning, plastics, photo-electric cell, artificial fibers from cellulose, synthetic rubber, prefabricated houses, television, facsimile transmission, trailers, gasoline from coal, steep-flight aircraft, tray agriculture.

Among the engineering and technological advances of 1937 were:

Golden Gate bridge and the San Francisco-Oakland Bay Bridge were completed and a man-made mile-square island created between them.

A coaxial cable carrying 240 simultaneous telephone conversations or one television message was put in operation between New York and Philadelphia.

Television of 441 lines was demonstrated.

Television tubes were made available commercially.

A new method of switching telephone calls, in which connections are made by closing relay-like contacts, is being put into use.

The first rural telephone central office to be served exclusively by wires plowed underground was placed in service.

Automatic radio receivers were authorized on U. S. ships.

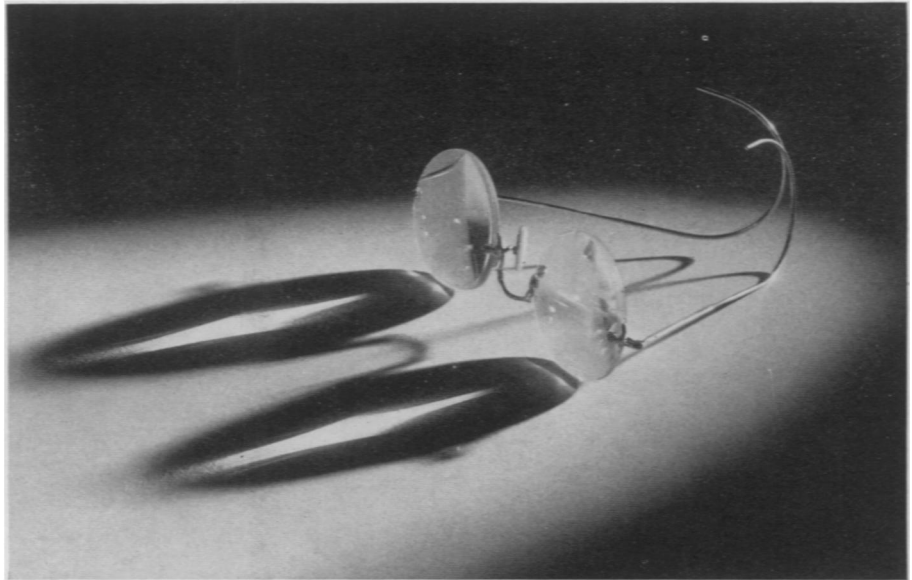
High-pressure mercury vapor lights were introduced commercially.

A method of sterilizing wool fabrics without injury was perfected.

A panchromatic photographic film three times the speed of fastest previously used was introduced.

Fatigue failure of machinery parts was traced to minute surface cracks which can be eliminated by initial polishing.

Heat treated cast irons were used for gears and other parts formerly made of steel.



"UNBREAKABLE"

Moulded from sheets of new transparent plastics are these light, comfortable glasses that do not endanger the eyes by likelihood of breaking. They are made by the Rohm and Haas Co.

Research in physical nature of lubrication led to treatment of lubricants to permit much higher bearing pressures.

High octane anti-knock gasolines at lower cost promised increased fuel efficiency for airplanes.

A new type of handset telephone with bell and coil in base was introduced commercially.

Carbon dioxide filled incandescent lamps, providing artificial daylight, were commercially perfected.

The world's first "free-flight" wind tunnel for aeronautic research was completed.

A new blind landing radio beam with antenna in an underground pit at the field's center was developed.

Improved tricycle type landing gear was available to private owners on several commercial aircraft.

The effects of roughness on wing surfaces was determined in new high-speed wind tunnel.

A new nose-slot N. A. C. A. cowling for radial air-cooled engines was developed to give better cooling and less drag.

Pressure water-cooling systems were applied to aircraft engines using pressure of 30 pounds per square inch.

Silver bearings were adopted in high power aviation engines.

An improved rotating-wing aircraft was developed using feathering blade control.

Survey flights for transatlantic air travel were made successfully.

Scheduled transpacific air travel was established.

A new world's aviation record for distance, 6305.7 miles, was made in a Soviet airplane from Moscow over the North Pole to San Jacinto, Calif.

A new unofficial landplane speed record of 379.16 miles per hour was established in Germany.

A new altitude mark for heavier-than-air craft was set at 53,937 feet in England.

The Normandie made eastward and westward record crossings of the Atlantic.

A new auto speed record of 311.42 miles per hour was established.

A motorboat speed record of 126.325 miles per hour was set.

MEDICAL SCIENCES

Animal Disease Virus Molecule Without Life

OF far-reaching promise was the report that the viruses of at least two animal diseases, in addition to those of certain plant diseases, are non-living protein molecules. New and more successful methods of treating and preventing the largely unconquered group of virus-caused ailments, to which belong infantile paralysis and encephalitis, may result from the new knowledge of the nature of the causes of these diseases. It has even been suggested that this discovery may give a clue to the secret of life itself, since it gives scientists a chance to study the phenomenon by which non-living matter appears to become endowed with characteristics of living matter.

Other outstanding medical events of the year follow:

Discovery that jaundice temporarily checks the progress of chronic deforming arthritis suggests that some degree of control of this crippling, disabling disease may be accomplished.

Congress appropriated \$750,000 for a National Cancer Institute building and \$400,000 for cancer research and control during the fiscal year.

Cures by sulfanilamide of Type III pneumonia, gonorrhoea, kidney and urinary tract in-